



STATE OF DELAWARE  
EXECUTIVE DEPARTMENT  
OFFICE OF MANAGEMENT AND BUDGET  
STATE PLANNING COORDINATION

April 2, 2008

Mr. John Van Sickle  
Davis, Bowen & Friedel  
23 North Walnut Street  
P.O. Box 809  
Milford, DE 19963

RE: PLUS review – 2008-02-02; Shipbuilder's LLC

Dear Mr. Van Sickle:

Thank you for meeting with State agency planners on March 5, 2008 to discuss the proposed plans for the project to be located on the west side of County Road 213, outside Ellendale.

According to the information received, you are considering proposing annexation into the Town of Ellendale. If you do not seek annexation, you hope to build in Sussex County using the cluster development ordinance for 262 residential units on 140 acres.

Please note that changes to the plan, other than those suggested in this letter, could result in additional comments from the State. Additionally, these comments reflect only issues that are the responsibility of the agencies represented at the meeting. The developers will also need to comply with any Federal, State and local regulations regarding this property. We also note that, unless annexed, as Sussex County is the governing authority over this land, the developers will need to comply with any and all regulations/restrictions set forth by the County.

**Executive Summary**

The following section includes some site specific highlights from the agency comments found in this letter. This summary is provided for your convenience and reference. The full text of this letter represents the official state response to this project. ***Our office notes that the applicants are responsible for reading and responding to this letter and all comments contained within it in their entirety.***

### **State Strategies/Project Location**

- The Office of State Planning and Coordination recognizes this parcel is within Investment Levels 2, 3, and 4 as defined by the State's Strategies for Policy and Spending.

### **Street Design and Transportation**

- DelDOT recommends that those sidewalks be extended north along Old State Road to Willow and Pin Oak Streets, with cross-walks there and at State Street.
- DelDOT recommends that driveway access be eliminated along the street connecting Old State Road and Sharons Road. This change would necessarily affect Lots 142 through 145, 149 through 157, 171 through 174, 195, 198 and 199 and would limit the location of driveways for several corner lots.
- It is recommended that the plan be re-designed to connect the two cul-de-sacs respectively serving Lots 163 and 232 for connectivity and improved access for first responders.

### **Natural and Cultural Resources**

- There are potential issues of tax ditch maintenance on the three private crossings on Prong 8 of the Ellendale Tax Ditch.
- Lots 239, 257, and 258 contain wetlands. Either these lots should be eliminated or a wetland statement placed on the property deed. The wetland statement should inform the owner of the high probability of drainage problems on the property due to wetlands.
- Lots 72, 79, 148, 151, 163, 166, and 233 are irregular in shape due to the lot line being the wetland line. A wetland statement should be placed on the property deed to inform potential owners of these lots of the wetlands and that during prolonged wet periods, portions of their property may become too wet for normal residential use.
- Designate all wetland buffers as un-subdivided open space. No portion of any building lot should be within the buffers. During prolonged wet periods, the wetland buffers may become too wet for normal residential use. Designation as open space will aid in the prevention of decks, sheds, fences, kennels, and backyards being placed within the buffers thereby reducing nuisance drainage complaints.
- The Drainage Program requests that the engineer take precautions to ensure the project does not hinder any off site drainage upstream of the project or create any off site drainage problems downstream by the release of on site storm water. The

Drainage Program requests that the engineer check existing downstream ditches and pipes for function and blockages prior to the construction. Notify downstream landowners of the change in volume of water released on them.

- In order to provide more informed comments, DNREC staff requests a site visit to the project area. This site visit would be conducted at no cost or liability to the landowner/developer. Please note that our scientists have decades of experience in comprehensive rare species survey methods. They have extensive knowledge of the flora and fauna of the State and are the most qualified in making rare species identifications. Please contact Edna Stetzar, Environmental Review Coordinator, at (302) 653-2880.

This office has received the following comments from State agencies:

**Office of State Planning Coordination – Contact: Bryan Hall 739-3090**

The Office of State Planning and Coordination (OSPC) recognizes the proposed The Office of State Planning and Coordination recognizes this parcel is within an Investment Levels 2, 3, and 4 as defined by the State's Strategies for Policy and Spending and is within the future annexation areas of the Town of Ellendale. The OSPC offers the following comments for consideration:

- As mentioned the project is within the Town of Ellendale's future annexation, with exception to a portion of the property at the southern most edge of the proposed project. If it is the intention of the project to annex into the Town, the current community comprehensive plan will need to be amended. Please contact this office at your earliest opportunity to discuss this process so I may be able to assist you and the community to address this issue.
- The developer should contact the Sussex County Engineering staff to discuss the necessary requirements for formal annexation into the East New Market Sanitary Sewer District. As part of this process and for consideration the developer will need to provide the following:
  1. **A letter of intent to annex into the sewer district.**
  2. **A preliminary site plan**
  3. **A preliminary engineered sketch for connect to the sewer district.**
  4. **A phased development planned for construction of housing units proposed.**
- This office encourages the developer to work with the storm-water / drainage section of DNREC to address those lots located within and or adjacent to wetland sites and tax ditches within the proposed.

- This office would ask the developer to coordinate its efforts with Del-Dot as it moves forward to develop proposed entrances and access for the proposed.

**State Historic Preservation Office (SHPO) – Contact: Terrence Burns 739-5685**

The State Historic Preservation Office of the Delaware Division of Historic & Cultural Affairs would like to advise the developer of the following historical observations and information in reference to this project area. Here are the following historical observations:

- There did not appear to be known historic or cultural resource site such as a known archaeological site or national register listed property site on this project area, but there are few known historic and cultural resource sites nearby, however their not to close to the project area. Each one of these historic and cultural resource sites is a **20th-century dwelling/house**, and they are located at the following: one of them is on/off of Road 213 (**S-3829**), another is on/off of Route 113 (**S-3963**), and other is on/off Road 641 off Route 113 (**S-3891**).
- Another historical aspect that the developer should be aware of is the historical background of the location of the project area. According to the Beers Atlas of 1868 this project area is within the vicinity of Cedar Creek Hundred, and there is a variety of historical attributes within the vicinity of Cedar Creek Hundred. The Beers Atlas of 1868 also indicates that there were two structures of some type very close to where the project area is located today. Those structures were associated to **B. Morris and J. Burton**, and there is a possibility that there could probably be potential historic and cultural resources or archaeological resources affiliated with or related to those structures.
- Since this project area is located where there is a known historic or cultural resource site nearby, there is possibility that there could probably be a potential historic or cultural resource of some type within this project area. This historic or cultural resource could also be some type of archaeological resource such as cemetery, burial ground, unmarked human remains, or some other type of hidden contents or remains that has significant historical attributes or aspects. It is very important that the developer become familiar with the laws and regulations of the state of Delaware that pertains to the discovery and disposition of archaeological resources and unmarked human burials or skeletal remains.
- The State Historic Preservation Office of the Delaware Division of Historic & Cultural Affairs strongly recommends that the developer should reads **Chapters 53 and 54, in Title 7, of the Delaware State Code** prior to or before any ground-disturbing activities, demolition, or construction starts or begins on this project area (parcel/property). **Chapter 53** pertains to the “Conservation of Archaeological Resources In or On State Lands”, and **Chapter 54 pertains to the Delaware Unmarked Human Remains Act of 1987**. The unexpected discovery archaeological

resources or unmarked human remains during construction can result in significant delays.

- The State Historic Preservation Office of the Delaware Division of Historic & Cultural Affairs also recommends strongly that the developer should consider hiring an archaeological consultant to check and examine the project area thoroughly prior to or before any ground-disturbing activities, demolition, or construction starts or begins on this project area. The purpose for this is to make sure that there is no indication or evidence of a potential historic or cultural resource or archaeological resource of some type such as a cemetery, burial ground, unmarked human remains, or some other type of hidden contents or remains with historical attributes.

**Department of Transportation – Contact: Bill Brockenbrough 760-2109**

- 1) Has an application been filed with the Town of Ellendale or Sussex County? DelDOT has recently revised its subdivision street and access regulations. Grandfathering provisions will exempt developments for which an application has been filed with the relevant government and accepted for review by that local government on or before March 31, 2008.
- 2) A traffic impact study was completed for the development of this property under the name Walker Property in 2005. At that time, the proposed use was 358 single-family detached houses. A copy of our consultant's August 16, 2005, review letter in that regard is available on request. While the technical details in the study and the review could be updated to reflect the passage of time and the change in the size of the development, DelDOT does not believe it would change the conclusions of either document. If the County, the Town or the developer find that an update of the study is necessary, DelDOT is willing to review an updated report. Absent such an update, they will proceed on the basis of the 2005 review letter.
- 3) DelDOT is pleased to see that sidewalks are proposed. They recommend that those sidewalks be extended north along Old State Road to Willow and Pin Oak Streets, with cross-walks there and at State Street. Even if this development is not annexed, it will function as part of Ellendale.
- 4) The plan includes a circular traffic feature with splitter islands that suggest a roundabout. This feature, however, as drawn, creates safety issues in that the center island is large enough to attract pedestrians, the circular roadway is wide enough for two-way traffic, and there would be driveways along the circular roadway. DelDOT is willing to work with the developer's engineer to adapt the design if they want to build a roundabout. Another course of action would be to simply remove the splitter islands in favor of Stop signs and sign the circular roadway for two-way traffic.

- 5) DelDOT recommends that driveway access be eliminated along the street connecting Old State Road and Sharons Road. This change would necessarily affect Lots 142 through 145, 149 through 157, 171 through 174, 195, 198 and 199 and would limit the location of driveways for several corner lots.
- 6) It is recommended that the plan be re-designed to connect the two cul-de-sacs respectively serving Lots 163 and 232 for connectivity and improved access for first responders.
- 7) The developer's site engineer should contact the DelDOT Subdivision Manager for western Sussex County, Mr. Derek Sapp, to determine specific requirements for access and off-site improvements. Mr. Sapp may be reached at (302) 760-4803.

**The Department of Natural Resources and Environmental Control – Contact: Kevin Coyle 739-9071**

### **Green Infrastructure**

Portions or all of the lands associated with this proposal are within the Livable Delaware Green Infrastructure area established under Governor Minner's Executive Order #61 that represents a network of ecologically important natural resource lands of special State conservation interest.

Green infrastructure is defined as Delaware's natural life support system of parks and preserves, woodlands and wildlife areas, wetlands and waterways, productive agricultural and forest land, greenways, cultural, historic and recreational sites and other natural areas all with conservation value. Preserving Delaware's Green Infrastructure network will support and enhance biodiversity and functional ecosystems, protect native plant and animal species, improve air and water quality, prevent flooding, lessen the disruption to natural landscapes, provide opportunities for profitable farming and forestry enterprises, limit invasive species, and foster ecotourism.

Voluntary stewardship by private landowners is essential to green infrastructure conservation in Delaware, since approximately 80 percent of the State's land base is in private hands. It is in that spirit of stewardship that the Department appeals to the landowner and development team to protect sensitive resources through an appropriate site design.

### **Soils**

According to the Sussex County soil survey update, Rosedale, Klej, Hurlock, Mullica, and Corsica were mapped in the immediate vicinity of the proposed project. Rosedale is a well-drained upland soil that, generally, has few limitations for development. Klej is a somewhat poorly-drained transitional soil likely to have both upland and wetland soil components; limitations for development are likely to be moderate to severe. Hurlock,

Mullica and Corsica are poorly to very poorly-drained wetland associated (hydric) soils that have severe limitations for development. Approximately 70-75% of the mapped soils on this parcel are estimated to be Hurlock, Mullica, and Corsica; as mentioned previously, these soils have severe limitations and should be avoided.

## **Wetlands**

Based on the Statewide Wetland Mapping Project (SWMP) maps, palustrine wetlands were mapped over much of the combined parcel land area. This mapping closely mirrors the mapped occurrence of the hydric soils, especially in the forested portions of the combined parcel.

The applicant is responsible for determining whether any State-regulated wetlands (regulated pursuant to 7 Del.C., Chapter 66 and the Wetlands Regulations) are present on the property. This determination can only be made by contacting the Division of Water Resources' Wetlands and Subaqueous Lands Section at 302/739-9943 and consulting the State's official wetland regulatory maps, which depict the extent of State jurisdiction. The area regulated by State law may be very different from the area under federal authority. No activity may take place in State-regulated wetlands without a permit from DNREC's Wetlands Section.

In addition, most perennial streams and ditches and many intermittent streams and ditches are regulated pursuant to the Subaqueous Lands Act (7 Del.C. Chapter 72) and the Regulations Governing the Use of Subaqueous Lands. Ponds which are connected to other waters are also regulated, while isolated ponds are not. Any work in regulated streams, ditches or ponds requires a permit from the Wetlands and Subaqueous Lands Section. An on-site jurisdictional determination is recommended in order to determine whether any regulated watercourses exist on the property. Contact the Wetlands and Subaqueous Lands Section at 302/739-9943 to schedule an on-site visit. Such appointments can usually be scheduled within 2 to 3 weeks.

The applicant should also be reminded that they must avoid construction/filling activities in those areas containing wetlands or wetland associated hydric soils as they are subject to regulatory jurisdiction under Section 404 provisions of the Clean Water Act. A site-specific field wetlands delineation using the methodology described in the 1987 United States Army Corps of Engineers (USACE, or "the Corps") manual is only acceptable basis for making a jurisdictional wetland determination for nontidal wetlands in Delaware. The applicant is forewarned that the Corps views the use of the National Wetlands Inventory (NWI) mapping or the Statewide Wetlands Mapping Project (SWMP) mapping as an unacceptable substitute for field-based jurisdictional wetland delineation (i.e., 1987 USACE manual). To ensure compliance with Corps regulatory requirements, it is strongly recommended that a field wetlands delineation using the above-referenced methodology be performed on this parcel before commencing any construction activities. It is further recommended that the Corps be given the opportunity to officially approve the completed delineation. In circumstances where the applicant or applicant's consultant delineates what they believe are nonjurisdictional isolated

(SWANCC) wetlands, the Corps must be contacted to evaluate and assess the jurisdictional validity of such a delineation. The final jurisdictional authority for making isolated wetlands determinations rests with the Corps. They can be reached by phone at 736-9763.

Impacts to Palustrine wetlands are regulated by the Corps through Section 404 of the Clean Water Act. In addition, individual 404 permits and certain Nationwide Permits from the Corps also require 401 Water Quality Certification from the DNREC Wetland and Subaqueous Land Section and Coastal Zone Federal Consistency Certification from the DNREC Division of Soil and Water Conservation, Delaware Coastal Management Program (DCMP) Section. Each of these certifications represents a separate permitting process. Please be advised that nationwide permits have been suspended in Delaware and are pending further coordination with the Corps. Therefore, contrary to past practices, Coastal Zone Management approval can no longer be assumed. Individual certifications must be granted from the DCMP office for each project intending to utilize a Nationwide Permit. For more information on the Federal Consistency process, please contact the DCMP office at 302.739.9283. To find out more about permitting requirements, the applicant is encouraged to attend a Joint Permit Process Meeting. These meetings are held monthly and are attended by federal and state resource agencies responsible for wetland permitting. Contact Denise Rawding at (302) 739-9943 to schedule a meeting.

Based on a review of existing buffer research by Castelle, et al. (Castelle, A. J., A. W. Johnson and C. Connolly. 1994. *Wetland and Stream Buffer Requirements – A Review*. J. Environ. Qual. 23: 878-882), an adequately-sized buffer that effectively protects wetlands and streams, in most circumstances, is about 100 feet in width. In recognition of this research and the need to protect water quality, the Watershed Assessment Section recommends that the applicant maintain/establish a minimum 100-foot upland buffer (planted in native vegetation) from the landward edge of all wetlands and water bodies (including all ditches).

As mentioned previously, most of the soil mapping units on this parcel are poorly to very poorly-drained hydric Hurlock, Mullica, and Corsica soils. Hydric soils typically have a seasonal high water table at or near the soil surface (within one-foot of soil surface or less). Building in such soils is likely to leave prospective residents of this and adjoining properties susceptible to future flooding problems from groundwater-driven surface water ponding, especially during extended periods of high-intensity rainfall events such as tropical storms/hurricanes or “nor’easters.” This is in addition to increased flooding probabilities from surface water runoff emanating from future created forms of structural imperviousness (roof tops, roads, sidewalks, and stormwater management structures).

Based on the Chapter 99, Section 16A of the Sussex County Code (paraphrased), lands compromised by improper drainage or flooding potential pose significant threats to the safety and general welfare of future residents and, therefore, shall not be developed. Since soils mapped as Hurlock, Mullica, and Corsica fit the criterion for improper drainage or high flooding potentials, they should be avoided. The Watershed Assessment

Section believes permitting development on such soils would be inconsistent with the above-stated regulatory guidelines in the Sussex County Code.

### **Impervious Cover**

Based on information provided by the applicant in the PLUS application form, post-construction surface imperviousness should not exceed 38 percent. However, given the scope and density of this project, post-construction surface imperviousness is likely to exceed 70%. The applicant should realize that all forms of constructed surface imperviousness (i.e., rooftops, sidewalks, open-water stormwater management structures, and roads) should be included in the calculation for surface imperviousness; this will ensure a realistic assessment of this project's likely post-construction environmental impacts.

The project's actual post-construction impacts should be recalculated to include all of the above-mentioned forms of constructed surface imperviousness. Failure to do so will significantly understate this project's true environmental impacts.

Studies have shown a strong relationship between increases in impervious cover to decreases in a watershed's overall water quality. It is strongly recommended that the applicant implement best management practices (BMPs) that reduce or mitigate some of its most likely adverse impacts. Reducing the amount of surface imperviousness through the use of pervious paving materials ("pervious pavers") in lieu of asphalt or concrete in conjunction with an increase in forest cover preservation or additional tree plantings are some examples of practical BMPs that could easily be implemented to help reduce surface imperviousness.

### **ERES Waters**

This project is located adjacent to receiving waters of the Gravelly Branch and the greater Nanticoke watershed, designated as having waters of Exceptional Recreational or Ecological Significance (ERES). ERES waters are recognized as special assets of the State, and shall be protected and/ or restored, to the maximum extent practicable, to their natural condition. Provisions in Section 5.6 of Delaware's "Surface Water Quality Standards" (as amended July 11, 2004), specify that all designated ERES waters and receiving tributaries develop a "pollution control strategy" to reduce non-point sources of pollutants through implementation of Best Management Practices (BMPs). Moreover, provisions defined in subsection 5.6.3.5 of same section, specially authorize the Department to mandate BMPs to meet standards for controlling the addition of pollutants and reducing them to the greatest degree achievable and, where practicable, implementation of a standard requiring no discharge of pollutants.

### **TMDLs**

Total Maximum Daily Loads (TMDLs) for nitrogen and phosphorus have been promulgated through regulation for the Gravelly Branch watershed. A TMDL is the

maximum level of pollution allowed for a given pollutant below which a “water quality limited water body” can assimilate and still meet water quality standards to the extent necessary to support use goals such as, swimming, fishing, drinking water and shell fish harvesting. Although TMDLs are required by federal law, states are charged with developing and implementing standards to support these desired use goals. In the greater Nanticoke watershed, “target-rate-nutrient reductions” of 30 and 50 percent will be required for nitrogen and phosphorus, respectively. Additionally, “target-rate-reductions” of 2 percent will be required for bacteria.

### **TMDL compliance through the PCS**

As indicated above, TMDLs for nitrogen and phosphorus have been proposed for the Gravelly Branch watershed. The TMDL calls for a 30 and 50 percent reduction in nitrogen and phosphorus from baseline conditions. The TMDL also calls for a 2 percent reduction in bacteria. A Pollution Control Strategy (PCS) will be used as a regulatory framework to ensure that these nutrient reduction targets are attained. The Department has developed an assessment tool to evaluate how your proposed development may reduce nutrients to meet the TMDL requirements. Additional nutrient reductions may be possible through the implementation of BMPs such as wider vegetated buffers along watercourses/wetlands, increasing the amount of passive, wooded open space, use of pervious paving materials to reduce surface imperviousness, and deployment of green-technology stormwater management treatment technologies. Contact Lyle Jones at 302-739-9939 for more information on the assessment tool.

### **Water Supply**

The information provided indicates that Tidewater Utilities will provide water to the proposed project(s) via a public water system. DNREC files reflect that Tidewater Utilities does not currently hold a Certificate of Public Convenience and Necessity (CPCN) to provide public water in these areas. They will need to file an application for a CPCN with the Public Service Commission, if they have not done so already.

Information on CPCN requirements and applications can be obtained by contacting the Public Service Commission at 302-739-4247. Since an on-site public well(s) be needed, it (they) must be located at least 150 feet from the outermost boundaries of the project(s). The Division of Water Resources will consider applications for the construction of on-site wells provided the wells can be constructed and located in compliance with all requirements of the Regulations Governing the Construction and Use of Wells. A well construction permit must be obtained prior to constructing any well(s).

Should dewatering points be needed during any phase of construction, a dewatering well construction permit must be obtained from the Water Supply Section prior to construction of the well points. In addition, a water allocation permit will be needed if the pumping rate will exceed 50,000 gallons per day at any time during operation.

All well permit applications must be prepared and signed by licensed water well contractors, and only licensed well drillers may construct the wells. Please factor in the necessary time for processing the well permit applications into the construction schedule.

Dewatering well permit applications typically take approximately four weeks to process, which allows the necessary time for technical review and advertising.

Should you have any questions concerning these comments, please contact Rick Rios at 302-739-9944.

### **Sediment and Erosion Control/Stormwater Management**

A detailed sediment and stormwater plan will be required prior to any land disturbing activity taking place on the site. Contact the reviewing agency to schedule a pre-application meeting to discuss the sediment and erosion control and stormwater management components of the plan as soon as practicable. The site topography, soils mapping, pre- and post-development runoff, and proposed method(s) and location(s) of stormwater management should be brought to the meeting for discussion. The plan review and approval as well as construction inspection will be coordinated through the Sussex Conservation District. Contact Jessica Watson at the Sussex Conservation District at (302) 856-2105 for details regarding submittal requirements and fees.

Because of the parcel's location in an impaired watershed and the amount of impervious surface, green technology BMPs and low impact development practices should be considered a priority to reduce stormwater flow and to meet water quality goals.

The Sediment and Stormwater Management Program ensures sediment and erosion control plans and stormwater plans comply with local land use ordinances and policies, including the siting of stormwater management facilities. However, we do not support placement in resource protection areas or the removal of trees for the sole purpose of placement of a stormwater management facility/practice.

### **Drainage**

1. This project is located within the Ellendale Tax Ditch, which has established tax ditch rights-of-way. The Drainage Program conducted a review of the Tax Ditch rights-of-way for this project and the results were submitted to Mr. John Van Sickle of Davis, Bowen & Friedel, Inc. Copies of the review findings are included in these comments. The placement of permanent obstructions within tax ditch rights-of-way is prohibited. Any change to the location of the tax ditch, or the existing tax ditch rights-of-way, will require a change to the Ellendale Tax Ditch court order. Please contact Brooks Cahall of the Drainage Program to resolve the issues with the tax ditch. It is suggested to include Brooks Cahall in the pre-application meeting with the Sussex Conservation District to discuss drainage, stormwater management, tax ditch maintenance, and the release of stormwater into the tax ditch.

2. There are potential issues of tax ditch maintenance on the three private crossings on Prong 8 of the Ellendale Tax Ditch.
3. Lots 239, 257, and 258 contain wetlands. Either these lots should be eliminated or a wetland statement placed on the property deed. The wetland statement should inform the owner of the high probability of drainage problems on the property due to wetlands.
4. Lots 72, 79, 148, 151, 163, 166, and 233 are irregular in shape due to the lot line being the wetland line. A wetland statement should be placed on the property deed to inform potential owners of these lots of the wetlands and that during prolonged wet periods, portions of their property may become too wet for normal residential use.
5. Designate all wetland buffers as un-subdivided open space. No portion of any building lot should be within the buffers. During prolonged wet periods, the wetland buffers may become too wet for normal residential use. Designation as open space will aid in the prevention of decks, sheds, fences, kennels, and backyards being placed within the buffers thereby reducing nuisance drainage complaints.
6. The Drainage Program requests that the engineer take precautions to ensure the project does not hinder any off site drainage upstream of the project or create any off site drainage problems downstream by the release of on site storm water. The Drainage Program requests that the engineer check existing downstream ditches and pipes for function and blockages prior to the construction. Notify downstream landowners of the change in volume of water released on them.
7. The Drainage Program encourages the elevation of rear yards to direct water towards the streets and alleyways where storm drains and swales are accessible for maintenance. However, the Drainage Program recognizes the need for catch basins in yards in certain cases. Therefore, catch basins and swales placed in rear and side yards will need to be clear of obstructions and be accessible for maintenance. Decks, sheds, fences, pools, and kennels can hinder drainage patterns as well as future maintenance to the storm drain, catch basin, or swale. Deed restrictions, along with drainage easements recorded on deeds, should ensure adequate future maintenance access.
8. Have all drainage easements recorded on deeds and place restrictions on obstructions within the easements to ensure access for periodic maintenance or future re-construction. Future property owners may not be aware of a drainage easement on their property if the easement is only on the record plan. However, by recording the drainage easement on the deed, the second owner, and any subsequent owner of the property, will be fully aware of the drainage easement on their property.

9. The Drainage Program does not support the removal of trees for the creation of stormwater management areas. However, the Drainage Program recognizes that tree removal is unavoidable in some cases. Where practical, plant native trees and shrubs to compensate for the loss of nutrient uptake and stormwater absorption the removed trees provided.

### Results of Tax Ditch Right-of-Way Review

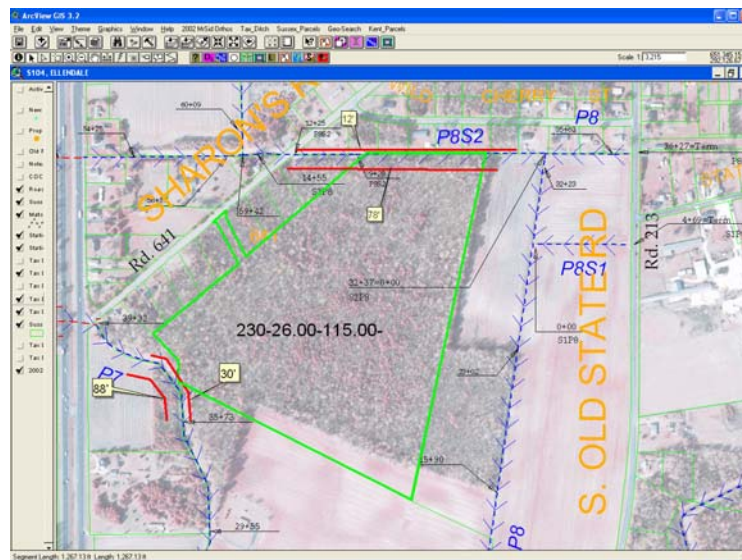
#### Parcel # 230-26.00-115.00 Inquiry #1588

- This parcel is located in the **Gravelly Branch** Tax Ditch watershed; however it is not affected by a Tax Ditch right-of-way.
- This parcel is located in the **Ellendale** Tax Ditch watershed and is affected by a Tax Ditch right-of-way.

Ellendale Tax Ditch	Left	Right
Prong 7	88'	30'
Sub 2 of Prong 8	78'	12'

Please note that the above rights-of-way are measured from the centerline of the ditch, with the exception of the ones noted with an asterisk, which are measured from top of the ditch bank. The designation of Left and Right side are based upon looking upstream.

See following map.

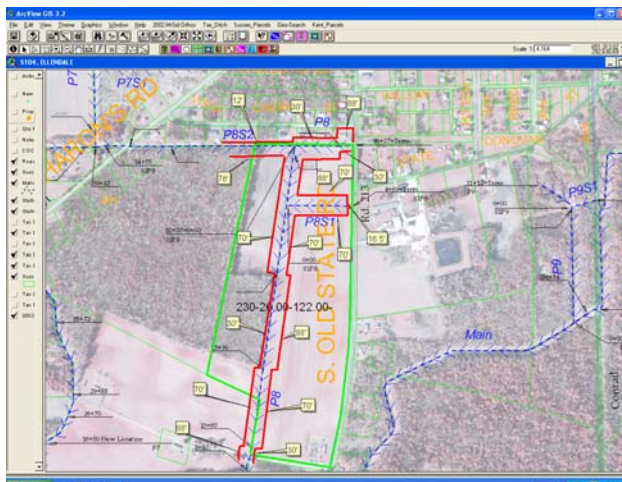


**Parcel # 230-26.00-122.00 Inquiry #1589**

- This parcel is located in the **Gravelly Branch** Tax Ditch watershed; however it is not affected by a Tax Ditch right-of-way.
- This parcel is located in the **Ellendale** Tax Ditch watershed and is affected by the following rights-of-way:

Ellendale Tax Ditch	Left	Right
Prong 8		
Station 8+82 to 10+60	88'	30'
Station 10+60 to 15+90	70'	70'
Station 15+90 to 23+02	30'	88'
Station 23+02 to 32+23	70'	70'
Station 32+23 to 35+63	30'	88'
Station 35+63 to 36+27	88'	30'
Sub 1 of Prong 8 <i>*also a 16.5' right-of-way around the upstream end of this Prong, measured from top of ditch bank.</i>	70'	70'
Sub 2 of Prong 8	78'	12'

- Please note that the above rights-of-way are measured from the centerline of the ditch, with the exception of the ones noted with an asterisk, which are measured from top of the ditch bank. The designation of Left and Right side are based upon looking upstream.

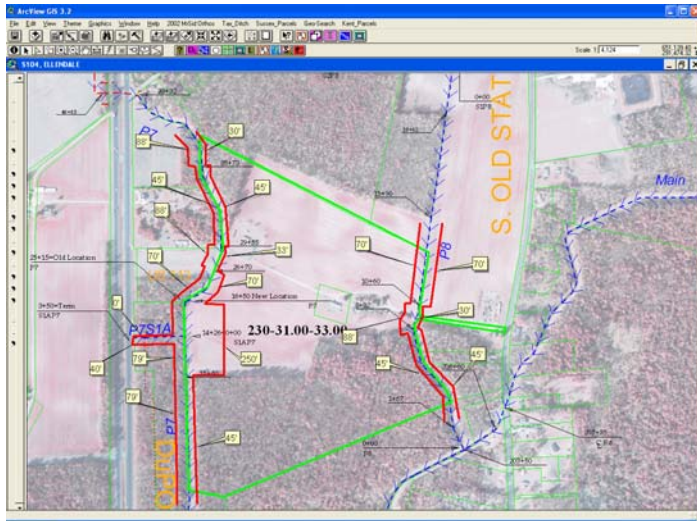


**Parcel # 230-31.00-33.00 Inquiry #1587**

- This parcel is located in the **Gravelly Branch** Tax Ditch watershed; however it is not affected by a Tax Ditch right-of-way.
- This parcel is located in the **Ellendale** Tax Ditch watershed and is affected by the following rights-of-way.

Ellendale Tax Ditch	Left	Right
Prong 7		
0+00 to 11+40	79'	45'
11+40 to 16+50	79'	250'
16+50 to 26+70	70'	70'
26+70 to 29+55	88'	33'
29+55 to 35+73	45'	45'
35+73 to 39+32	88'	30'
Sub 1A of Prong 7		
0+00 to Terminus	40'	0'*
Prong 8		
Station 1+67 to 8+82	45'	45'
Station 8+82 to 10+60	88'	30'
Station 10+60 to 15+90	70'	70'

- Please note that the above rights-of-way are measured from the centerline of the ditch, with the exception of the one noted with an asterisk, which is measured from top of the ditch bank. These rights-of-way include the entire ditch from the top of one bank to the top of the bank on the opposite side. The designation of Left and Right side are based upon looking upstream. See following map.



## **Rare Species**

DNREC has never surveyed the project area; therefore, it is unknown if there are State-rare or federally listed plants, animals or natural communities at this project site.

However, State-endangered *Melanerpes erthrocephalus* (Red-headed Woodpecker), and State-rare *Virginia valeriae* (smooth earth snake), and State-rare *Styrium liparops strigosum* (striped hairstreak) occur in a forest block just east of this site and they could occur within the project area as well.

## **Site Survey Request**

In order to provide more informed comments, DNREC staff requests a site visit to the project area. This site visit would be conducted at no cost or liability to the landowner/developer. Please note that our scientists have decades of experience in comprehensive rare species survey methods. They have extensive knowledge of the flora and fauna of the State and are the most qualified in making rare species identifications. Please contact Edna Stetzar, Environmental Review Coordinator, at (302) 653-2880.

## **Forest Preservation/Wildlife Habitat**

The site plan was not designed with sensitivity to maintaining forest connections or for maintaining the integrity of wetlands. The 65 acres of forest that occurs on this property are going to be fragmented or cleared (at least 24 acres) leaving very little habitat connectivity for wildlife. In addition, a large part of the forested area contains wetlands which can support an array of plant and animal species. These wetlands are going to be fragmented by road crossings, infrastructure and impacted because inadequate upland buffers are being proposed.

Wildlife displaced by this project will either attempt to co-exist with new residents or disperse into surrounding areas. Either scenario can lead to human/animal conflicts including interactions on the roadways. Forest fragmentation separates populations, and leaves many forests dwelling species (especially songbirds) vulnerable to predation and infiltration by invasive species.

Cumulative forest loss throughout the State is of utmost concern to the Division of Fish and Wildlife, which is responsible for conserving and managing the State's wildlife (see [www.fw.delaware.gov](http://www.fw.delaware.gov) and the Delaware Code, Title 7). Because of an overall lack of State, county and local forest protection, we have to rely on landowners/developers and/or the entity that approves projects (i.e. counties and municipalities) to consider implementing recommendations that will aide in reducing forest loss.

### **Recommendations:**

1. DNREC recommends consideration for preservation of the forest be made. There are incentive-based programs for wildlife management available to private

landowners through our agency. Please contact Shelley Tovell at (302) 735-3605 if the landowner(s) is interested in more information.

If preservation is not going to be considered DNREC recommends the following:

1. DNREC highly recommends that the site plan be redesigned with greater sensitivity for existing natural resources. Lots that occur within or within close proximity to forested wetlands should be omitted. Lot #s 55-88, 100, 101, 114, 120, 141, 175, 212-239 and 255 to 262 are all located within forested wetlands or too close to forested wetlands.
2. Relocate stormwater ponds that will require tree clearing or that are too close (within 100 feet) of wetlands. Also, alternative methods of stormwater management that do not require tree clearing should be discussed with the district engineer (or entity that certifies the stormwater plan).
3. The applicant indicates that disturbance will take place within 100 feet of existing wetlands. To protect rare species, maintain water quality and to reduce forest loss we highly recommend that the existing forested buffer be maintained and not contain lots or infrastructure. At the very least, a minimum 100-foot buffer comprised of existing vegetation should be left intact between wetland boundaries and ponds, roadways or lot lines. Current State, County and local buffer width requirements do not appear to recognize scientific research which supports the need for 100-foot wetland buffers for adequate protection of water quality. Riparian buffers also serve as critical habitat for wetland dependent species which utilize upland buffers during a portion of their life cycle, and as a travel corridor for wildlife which often travel along water courses during migratory, foraging or seasonal movements.
4. If trees are still going to be cleared despite our objections, we recommend clearing not occur April 1st to July 31st to reduce impacts to nesting birds and other wildlife species that utilize forests for breeding. This clearing recommendation would only protect those species during one breeding season; once trees are cleared the result is an overall loss of habitat.

### **Plant Rescue**

Since woodlands are going to be cleared and fragmented and wetlands are going to be impacted by inadequate buffers, we recommend that the developer/landowner contact the Delaware Native Plant Society to initiate a plant rescue. Selected plants from the site of disturbance will be collected by Society members and transplanted to the Society's nursery. Plants will then be used in restoration projects and/or sold at the Society's annual native plant sale. This can be done at no expense or liability to the developer/landowner. Please contact William A. McAvoy at (302) 653-2883, ([william.mcavoy@state.de.us](mailto:william.mcavoy@state.de.us)).

## **Nuisance Waterfowl**

Wet ponds created for stormwater management purposes may attract resident Canada geese and mute swans that will create a nuisance for community residents. High concentrations of waterfowl in ponds create water-quality problems, leave droppings on lawn and paved areas and can become aggressive during the nesting season. Short manicured lawns around ponds provide an attractive habitat for these species.

The Division of Fish and Wildlife does not provide goose control services, and if problems arise, residents or the home-owners association will have to accept the burden of dealing with these species (e.g., permit applications, costs, securing services of certified wildlife professionals). Solutions can be costly and labor intensive; however, with proper landscaping, monitoring, and other techniques, geese problems can be minimized.

### **Recommendation:**

1. DNREC recommends plantings of native species of tall grasses, wildflowers, shrubs, and trees at the edge and within an adequate buffer (15-30 feet in width) around the ponds. When the view of the surrounding area from the pond is blocked, geese can't scan for predators and are less likely to congregate and nest in the area of the pond.

At this time, they do not recommend using monofilament grids due to the potential for birds and other wildlife to become entangled if the grids are not properly installed and maintained. In addition, the on-going maintenance (removing entangled trash, etc.) may become a burden to the homeowners association or land manager.

## **State Resource Areas/Natural Areas**

The forest to the north of the property is roughly 40 acres. Lots 212 to 239, 255 to 262, 100, 101, and 141 to 175 are all located within forested wetlands.

A stormwater management pond is proposed in forested wetlands across from lot 148. Forests should not be removed to locate stormwater facilities, especially when they are forests associated with wetlands.

The forest to the south is on the Delaware Natural Area Inventory, a State Resource Area, and is approximately 27 acres. This forest is part of a larger forest complex. Lots 55-88 and 114 to 120 are either located too close to or directly over these forested wetlands.

This is not an ecologically sensitive development plan for lands in and around State Resource Areas and Natural Areas. The forests on this property are wet forests, excellent habitat for amphibian and reptilian species. That said, the open space proposed in the northern wetland forest is fragmented. The site design should be laid out in such a

manner as to protect the integrity of the forested wetlands on the property, not fragment the forest, or fill important freshwater wetlands. The site design should be concentrated in the open areas, providing an appropriate buffer to the forested wetlands, at least 50 feet.

### **Underground Storage Tanks**

There are no LUST site(s) located near the proposed project. However, should any underground storage tank or petroleum contaminated soil be discovered during construction, the Tank Management Branch must be notified as soon as possible. It is not anticipated that construction specifications would need to be changed due to petroleum contamination. However, should any unanticipated contamination be encountered and PVC pipe is being utilized, it will need to be changed to ductile steel with nitrile rubber gaskets in the contaminated areas.

### **State Fire Marshal's Office – Contact: Duane Fox 856-5298**

These comments are intended for informational use only and do not constitute any type of approval from the Delaware State Fire Marshal's Office. At the time of formal submittal, the applicant shall provide; completed application, fee, and three sets of plans depicting the following in accordance with the Delaware State Fire Prevention Regulation (DSFPR):

- a. **Fire Protection Water Requirements:**
  - Water distribution system capable of delivering at least 1000 gpm for 1-hour duration, at 20-psi residual pressure is required. Fire hydrants with 800 feet spacing on centers.
  - Where a water distribution system is proposed for townhouse and single family type dwelling sites, the infrastructure for fire protection water shall be provided, including the size of water mains.
- b. **Fire Protection Features:**
  - For townhouse buildings, provide a section / detail and the UL design number of the 2-hour fire rated separation wall on the Site plan
- c. **Accessibility:**
  - All premises, which the fire department may be called upon to protect in case of fire, and which are not readily accessible from public roads, shall be provided with suitable gates and access roads, and fire lanes so that all buildings on the premises are accessible to fire apparatus. This means that the access road to the subdivision from County Route 213 must be constructed so fire department apparatus may negotiate it. . If a "center island" is placed at an entrance into the subdivision, it shall be arranged in such a manner that it will not adversely affect quick and unimpeded travel of fire apparatus into the subdivision.

- Fire department access shall be provided in such a manner so that fire apparatus will be able to locate within 100 ft. of the front door.
- Any dead end road more than 300 feet in length shall be provided with a turn-around or cul-de-sac arranged such that fire apparatus will be able to turn around by making not more than one backing maneuver. The minimum paved radius of the cul-de-sac shall be 38 feet. The dimensions of the cul-de-sac or turn-around shall be shown on the final plans. Also, please be advised that parking is prohibited in the cul-de-sac or turn around.
- The use of speed bumps or other methods of traffic speed reduction must be in accordance with Department of Transportation requirements.
- The local Fire Chief, prior to any submission to our Agency, shall approve in writing the use of gates that limit fire department access into and out of the development or property.

d. **Gas Piping and System Information:**

- Provide type of fuel proposed, and show locations of bulk containers on plan.

e. Required **Notes:**

- Provide a note on the final plans submitted for review to read “ All fire lanes, fire hydrants, and fire department connections shall be marked in accordance with the Delaware State Fire Prevention Regulations”
- Proposed Use
- Square footage of each structure (Total of all Floors)
- National Fire Protection Association (NFPA) Construction Type
- Maximum Height of Buildings (including number of stories)
- Name of Water Provider
- Letter from Water Provider approving the system layout
- Townhouse 2-hr separation wall details shall be shown on site plans
- Provide Road Names, even for County Roads

Preliminary meetings with fire protection specialists are encouraged prior to formal submittal. Please call for appointment. Applications and brochures can be downloaded from our website: [www.statefiremarshal.delaware.gov](http://www.statefiremarshal.delaware.gov), technical services link, plan review, applications or brochures.

**Department of Agriculture - Contact: Scott Blaier 739-4811**

The Delaware Department of Agriculture has no objections to the proposed project. The project is to be annexed into the Town of Ellendale, and the *Strategies for State Policies and Spending* encourages environmentally responsible development in Investment Level 2 and 3 areas.

### *Right Tree for the Right Place*

The Delaware Department of Agriculture Forest Service encourages the developer to use the “Right Tree for the Right Place” for any design considerations. This concept allows for the proper placement of trees to increase property values in upwards of 25% of appraised value and will reduce heating and cooling costs on average by 20 to 35 dollars per month. In addition, a landscape design that encompasses this approach will avoid future maintenance cost to the property owner and ensure a lasting forest resource. To further support this concept the Delaware Forest Service does not recommend the planting of the following species due to the high risk of mortality from insects and disease:

Callery Pear  
Leyland Cypress

Ash Trees  
Red Oak (except for Willow Oak)

If you would like to learn more about the potential problems or impacts associated with these trees, please contact the Delaware Forest Service for more information at (302) 698-4500.

### *Native Landscapes*

The Delaware Department of Agriculture and the Delaware Forest Service encourages the developer to use native trees and shrubs to buffer the property from the adjacent land-use activities near this site. A properly designed forested buffer can create wildlife habitat corridors and improve air quality to the area by removing six to eight tons of carbon dioxide annually and will clean our rivers and creeks of storm-water run-off pollutants. To learn more about acceptable native trees and how to avoid plants considered invasive to our local landscapes, please contact the Delaware Department of Agriculture Plant Industry Section at (302) 698-4500.

### **Public Service Commission - Contact: Andrea Maucher 739-4247**

Any expansion of natural gas or installation of a closed propane system must fall within Pipeline Safety guidelines. Contact: Malak Michael at (302) 739-4247.

### **Delaware State Housing Authority – Contact Vicki Powers 739-4263**

This proposal is for a site plan review of a 262 lot residential subdivision on 140 acres located on the west side of County Road 213, just outside of Ellendale. According to the State Strategies Map, the proposal is located in Investment Level 2 and 3 areas. As a general planning practice, DSHA encourages residential development in these areas where residents will have proximity to services, markets, and employment opportunities. Furthermore, we support the fact that this proposal targets the full range of incomes including first time homebuyers. According to the most recent real estate data collected by DSHA, the average home price in Sussex County is \$280,000. However, families

earning respectively 100% of Sussex County's median income only qualify for mortgages of \$164,791, thus creating an affordability gap of \$115,209. The provision of units within reach of families earning at least 100% of Sussex County's median income will ensure housing that is affordable to first-time homebuyers.

**Department of Education – Contact: John Marinucci 735-4055**

This proposed development is within the Milford School District. DOE offers the following comments on behalf of the Milford School District.

1. Using the DOE standard formula, this development will generate an estimated 131 students.
2. DOE records indicate that the Milford School Districts' *elementary schools are at or beyond 100% of current capacity* based on September 30, 2007 elementary enrollment.
3. DOE records indicate that the Milford School Districts' *secondary schools are not at or beyond 100% of current capacity* based on September 30, 2007 secondary enrollment.
4. The Milford School District has communicated to the DOE the district's lack of capacity at all grade levels given the number of planned and recorded residential sub divisions within district boundaries.
5. This development will create significant additional elementary and secondary student population growth which will further compound the existing shortage of space experienced by the Milford School District.
6. The developer is strongly encouraged to contact the Milford School District Administration to address the issue of school over-crowding that this development will exacerbate.
7. DOE requests developer work with the Milford School District transportation department to establish developer supplied bus stop shelter ROW and shelter structures, interspersed throughout the development as determined and recommended by the school district.

**Sussex County – Contact: Richard Kautz 855-7878**

The project is within an area proposed for annexation by the Town of Ellendale. Prior to submitting the project to Sussex County the applicant should (1) contact the town to apprise them of the project and (2) determine if the terms for annexation can be agreed upon.

The State Wetlands map indicates the possibility of wetlands impacting the location of proposed subdivision lots and roads. Therefore a jurisdictional determination letter should be provided to support the proposed design for that area and that the lot layout (see Lots 170, 257 and 258) does not contain any wetlands. This letter should be obtained prior to the request for approval of any final plan.

The plan should show the type/location of monuments or fencing that distinguishes the upland edge of the wetlands.

Because this project is an AR-1 Cluster subdivision, the developer must comply with all ordinance amendments and include in the application a plan for the management of all open space. Separating the calculations for the AR-1 and the GR zoned land will help. Also, the developer must document for the Planning and Zoning Commission how the proposed cluster portion of the development: provides for a total environment and design which are superior to that which would be allowed under the standard lot option; preserves the natural environment and historic or archeological resources; and, will not have an adverse effect on any of the items included under Ordinance Number 1152 (County Code 99-9C). For example, over 40 of the lots do not have direct access to open space. Most of the remaining open space is that which would otherwise be required with or without the clustering (i.e. stormwater management, buffers, and utilities). These issues can be addressed by including in the County application an explanation of how the developer plans to mitigate them and the issues raised by the State agencies during this review.

The Sussex County Engineer Comments:

Parcels 115 and 122 of the proposed project are within the boundary of the Ellendale Sanitary Sewer District and connection to the sewer system is mandatory. The remaining parcels adjoin the existing sewer district and Sussex County will consider annexing the parcels into the sewer district following completion of certain administrative procedures. The project is within planning study and design assumptions for sewer service. In addition, we recommend the developer contact the Town Of Ellendale for annexation into the town.

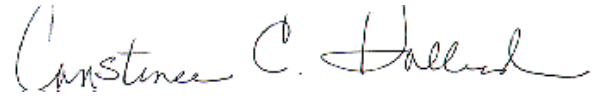
The proposed development will require a developer installed collection system in accordance with Sussex County standard requirements and procedures. Conformity with the Ellendale Treatment and Disposal Options report is also required. The Sussex County Engineer must approve the connection point. The Sussex County Engineering Department requires that a Sewer Concept Plan be submitted for the whole project for review and approval prior to requesting annexation into the Ellendale Sanitary Sewer District. A checklist for preparing conceptual plans and the County's policy and steps for extending sewer district boundaries were handed out at the meeting.

One time system connection charges will apply. Please contact Ms. Blair Lutz at 302 855-7801 for additional information on charges.

**Following receipt of this letter and upon filing of an application with the local jurisdiction, the applicant shall provide to the local jurisdiction and the Office of State Planning Coordination a written response to comments received as a result of the pre-application process, noting whether comments were incorporated into the project design or not and the reason therefore.**

Thank you for the opportunity to review this project. If you have any questions, please contact me at 302-739-3090.

Sincerely,

A handwritten signature in dark ink, reading "Constance C. Holland". The signature is fluid and cursive, with the first name "Constance" being more prominent than the last name "Holland".

Constance C. Holland, AICP  
Director

CC: Sussex County